

TAKING AN ALTERNATIVE ROUTE

**COMPARATIVE  
ALTERNATIVE/CLEAN  
FUEL PROVISIONS OF**

**THE CLEAN AIR ACT  
AND THE  
ENERGY POLICY ACT**

ALTERNATIVE FUEL INFORMATION  
U. S. DEPARTMENT OF ENERGY

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# INTRODUCTION

The following is a side-by-side comparative summary of the fleet provisions and incentives under the Clean Air Act (CAA) and the Energy Policy Act (EPA). For more information on how to comply, contact your regional U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) offices in addition to your state energy or air quality office.

## Comparative Alternative/Clean Fuel Provisions of the Clean Air Act and the Energy Policy Act

Provision	Clean Air Act	Energy Policy Act
Persons Affected	Public or private fleet owners or operators with 10 or more vehicles centrally fueled or capable of being centrally fueled 100% of the time.	<p>“Persons” who own, operate, lease or control at least 50 vehicles in the United States (centrally fueled or capable of being centrally fueled), primarily operated in a Consolidated Metropolitan Statistical Area (CMSA) with a population of 250,000 or more.</p> <p>For state government fleets, “persons” affected may be the entire state government fleet, or all the individual state agency fleets, aggregated in groups of two or more agencies.</p> <p>For alternative fuel providers, “persons” affected refers to fuel providers: (1) whose “principal business” is producing, storing, refining, processing, transporting, distributing, importing or selling (at wholesale or retail) any alternative fuel (other than electricity); or (2) whose “principal business” is generating, transmitting, importing or selling (at wholesale or retail) electricity; or (3) if those fuel providers produce, import, or produce and import (in combination) an average of 50,000 barrels per day or more of petroleum and 30% or more of their gross annual revenues are derived from producing alternative fuels.</p>

Provision	Clean Air Act	Energy Policy Act
<b>Areas Affected</b>	Metropolitan areas with populations of 250,000 or more and designated by EPA as being in serious, severe or extreme non-attainment of either ambient ozone or carbon monoxide (CO) standards (see Attachment A).	More than 120 cities with populations of 250,000 or more (see Attachment B).
<b>Fleet Definition</b>	<p>Ten or more heavy-duty vehicles (HDVs) or light-duty passenger cars (LDVs) or trucks (LDTs) operated in the affected area.</p> <p>LDVs/LDTs: &lt; 8,500 lb gross vehicle weight (GVWR)            HDVs: 8,500-26,000 lb GVWR</p>	Fleets of 20 or more LDVs or LDTs less than 8,500 lb GVWR capable of being centrally fueled that are owned, operated, leased or controlled by a governmental entity or by another person who controls 50 or more such vehicles nationally (see Exemptions).
<b>Commencement Dates of Purchase Requirements</b>	1999 (see Attachment C)	1993 (federal fleets) 1997 (state fleets) 1997 (alternative fuel provider fleets) 2002 (municipal/private fleets by DOE rule)
<b>Purchase Requirements</b>	Covered fleets need to buy clean fuel vehicles (CFVs) as a percentage of new purchases (see Attachment C for percentages).	Covered fleets need to buy alternative-fuel vehicles (AFVs) as a percentage of new purchases (see Attachment C for federal, state, fuel provider, municipal and private fleet requirements).
<b>Fuel Definitions</b>	<p><b>Clean Alternative Fuels:</b>            Any power source on which a vehicle is certified to meet federal CFV emission standards. This includes all the alternative fuels as well as conventional and reformulated gasoline, and diesel and clean diesel fuels. For emission standards, contact EPA.</p>	<p><b>Alternative Fuels:</b>            Methanol (M85)            Ethanol (E85)            Other alcohols, separately or in mixtures of 85% by volume or more (but not less than 70% by rule) with gasoline or other fuels            Compressed natural gas            Liquefied natural gas            Liquefied petroleum gas            Hydrogen            Coal-derived liquid fuels            Biofuels (derived from biological materials)</p>



Provision	Clean Air Act	Energy Policy Act
<p><b>Buses</b></p>	<p><b>Urban Bus Standards</b>  For the 1994 and 1995 model years, urban bus engines must meet a 0.07 grams per brake horsepower hour (g/bhp-hr) particulate matter (PM) emissions standard. For 1996 and later model years, the PM standard is 0.05 g/bhp-hr.</p> <p>EPA must perform annual testing of a representative sample of 1994 and later model year urban buses. If EPA determines that urban buses are not complying with the PM standards, the CAA requires the use of “low-polluting fuels” (methanol, ethanol, propane, natural gas or any comparably low-polluting fuel). The low-polluting fuels program would apply in cities with populations of 750,000 or more.</p> <p>As of January 1995, new emissions requirements apply to 1993 and earlier model year urban bus engines that are rebuilt or replaced. Urban bus operators may choose between two options. Under the first option, at time of rebuild, an operator must install retrofit equipment that has been certified with EPA to achieve a specified cost. Under the second option, an operator must reduce the average PM emissions level of its urban bus fleet by a specified amount each year. The retrofit program will apply in cities with a population of 750,000 or more.</p>	<p><b>Bus Demonstrations</b>  <i><b>Urban Buses:</b></i> The U.S. Department of Transportation (DOT) and DOE shall initiate cooperative ventures with local governments (in urban areas with populations of 100,000 or more) to cover the incremental costs of operating and purchasing buses using alternative fuels, including vehicle conversions.</p> <p><i><b>School Buses:</b></i> DOT may provide financial assistance to local units of government (in urban areas with populations of 100,000 or more) to cover the incremental costs of operating and purchasing buses using alternative fuels, including vehicle conversions.</p>

Provision	Clean Air Act	Energy Policy Act
<b>Nonroad Engines</b>	<p>Compression-ignition (CI) engines (diesel-fueled) greater than 50 horsepower (hp) must comply with Tier 1 emissions standards being phased in between 1996 and 2000 depending on the engine size. Tier 1 standards do not apply to engines used in underground mining equipment, locomotives, and marine vessels. Regulations addressing emissions from small CI engines less than 50 hp and Tier 2 regulations for engines greater than 50 hp are being developed.</p> <p>Small spark-ignition (SI) engines (fueled by gasoline, natural gas, propane, or methanol) at or below 25 hp must comply with Phase 1 emissions standards beginning in 1997. Phase 2 regulations addressing emissions from small SI engines are under development. Phase 1 standards do not apply to engines used in underground mining equipment, aircraft, and recreational equipment. Separate requirements apply to marine engines. SI engines above 25 hp are not currently regulated by EPA, except for those used in marine applications.</p>	<p>DOE is required to conduct a study to determine the effectiveness of using alternative fuels in nonroad vehicles in “surface transportation” such as rail, airport, marine and other vehicles.</p>
<b>Incentives</b>	<p>For CFFP fleets, CFVs are exempt from time-based transportation control measures. CFVs that are certified as ILEV (inherently low-emission vehicle) are also exempt from high occupancy-vehicle (HOV) lane restrictions.</p>	<p>Deductions from adjusted gross income are provided as follows for the incremental costs of the engine, fuel storage and delivery system, and exhaust/emissions control system of AFVs (including retrofits) and refueling facilities placed in service after June 30, 1993:</p> <p>AFVs below 10,000 lb GVWR: up to \$2,000</p>

Provision	Clean Air Act	Energy Policy Act
<b>Incentives (Cont.)</b>		<p>AFVs 10,000 - 26,000 lb GVWR*: up to \$5,000</p> <p>Trucks/Vans more than 26,000 lb GVWR*: up to \$50,000</p> <p>Buses with seating capacity of 20 or more adults*: up to \$50,000</p> <p>Electric Vehicles: 10% tax <b>credit</b> up to \$4,000/vehicle</p> <p>AFV Refueling Facility: up to \$100,000</p> <p>Only the incremental costs of the qualified items can be deducted for dual- or flexible-fuel vehicles.</p>
<b>Replacement Fuel</b>	No provision	<p>The portion of a motor fuel that is methanol, ethanol or other alcohols, CNG, LPG, hydrogen, coal-derived liquid fuel, fuel derived from biological materials, and electricity.</p> <p>DOE may determine by rule that any other fuel that is “substantially not petroleum” and yielding “substantial energy security benefits and substantial environmental benefits” will qualify as a replacement fuel.</p> <p>Petroleum reduction targets: By 2000: 10% replacement By 2010: 30% replacement</p>
<i>*These vehicles are not cover by EPACT mandates.</i>		



Provision	Clean Air Act	Energy Policy Act
<b>Exemptions</b>	<p>Vehicles that are exempt under the CFFP include the following:</p> <p>Vehicles weighing more than 26,000 lb GVWR;</p> <p>Public leased or rented vehicles;</p> <p>Vehicles for sale by dealers;</p> <p>Law enforcement vehicles;</p> <p>Emergency vehicles;</p> <p>Non-road vehicles;</p> <p>Vehicles garaged at personal residences; and</p> <p>Motor vehicles used for OEM testing.</p>	<p>Exemptions can be provided if alternative fuels or AFVs are not available.</p> <p>AFVs are deemed “unavailable” if original equipment manufacturer (OEM) AFVs that meet the normal requirements and practices of a covered fleet are not sold or leased within any of the states in which the fleet operates. If OEM AFVs are available but cannot accommodate specific operating requirements and practices of the covered fleet, that fleet may qualify for an exemption under the program.</p> <p>Vehicles that are exempt include:</p> <p>Public leased or rented vehicles;</p> <p>Vehicles for sale by dealers;</p> <p>Law enforcement vehicles;</p> <p>Emergency vehicles;</p> <p>Vehicles certified by U.S. Secretary of Defense as exempt for national security reasons;</p> <p>Vehicles used by a university or testing laboratory for research purposes;</p> <p>Nonroad vehicles; and</p> <p>Vehicles parked at personal residences, when not in use.</p>

# **ATTACHMENT A**

## **Areas Cover in Clean Air Act Clean-Fuel Fleet Program**

Atlanta, GA

Baton Rouge, LA

Chicago-Gary-Lake County, IL-IN

Denver-Boulder, CO

Milwaukee-Racine-Kenosha, WI

Washington, DC-MD-VA

# ATTACHMENT B

## Metropolitan Areas with a Population of 250,000 or Moore

- Albany-Schenectady-Troy, NY
- Albuquerque, NM
- Allentown-Bethlehem-Easton, PA
- Appleton-Oshkosh-Neenah, WI
- Atlanta, GA
- Augusta-Aiken, GA-SC
- Austin-San Marcos, TX
- Bakersfield, CA
- Baton Rouge, LA
- Beaumont-Port Arthur, TX
- Binghamton, NY
- Birmingham, AL
- Boise City, ID
- Boston-Lawrence-Worcester, MA-NH
- Buffalo-Niagara Falls, NY
- Canton-Massillon, OH
- Charleston, WV
- Charleston-North Charleston, SC
- Charlotte-Gastonia-Rock Hill, NC-SC
- Chattanooga, TN-GA
- Chicago-Gary-Kenosha, IL-IN-WI
- Cincinnati-Hamilton, OH-KY-IN
- Cleveland-Akron, OH
- Colorado Springs, CO
- Columbia, SC
- Columbus, GA-AL
- Columbus, OH
- Corpus Christi, TX
- Dallas-Fort Worth, TX
- Davenport-Rock Island-Moline, IA-IL
- Dayton-Springfield, OH
- Daytona Beach, FL
- Denver-Boulder-Greeley, CO
- Des Moines, IA
- Detroit-Ann Arbor-Flint, MI
- Duluth, MN-WI
- El Paso, TX
- Entire State, RI
- Erie, PA
- Eugene-Springfield, OR
- Evansville-Henderson, IN-KY
- Fresno, CA
- Ft. Wayne, IN
- Grand Rapids-Muskegon-Holland, MI
- Greensboro-Winston Salem-High Point, NC
- Greenville-Spartanburg-Anderson, SC
- Harrisburg-Lebanon-Carlisle, PA
- Hartford, CT
- Hickory-Morgantown, NC
- Honolulu, HI
- Houston-Galveston-Brazoria, TX
- Huntington-Ashland, WV-KY-OH
- Indianapolis, IN
- Jackson, MS
- Jacksonville, FL
- Johnson City-Kingsport-Bristol, TN-VA
- Johnstown, PA
- Kalamazoo-Battle Creek, MI
- Kansas City, MO-KS
- Knoxville, TN
- Lakeland-Winter Haven, FL
- Lancaster, PA
- Lansing-East Lansing, MI
- Las Vegas, NV-AZ
- Lexington, KY
- Little Rock-North Little Rock, AR
- Los Angeles-Anaheim-Riverside, CA
- Louisville, KY-IN
- Macon, GA
- Madison, WI
- McAllen-Edinburg-Mission, TX
- Melbourne-Titusville-Palm Bay, FL
- Memphis, TN-AR-MS
- Miami-Ft. Lauderdale, FL
- Milwaukee-Racine, WI
- Minneapolis-St. Paul, MN-WI
- Mobile, AL
- Modesto, CA
- Montgomery, AL
- Nashville, TN
- New Haven-Meriden, CT
- New London-Norwich, CT-RI
- New Orleans, LA
- New York-Northern New Jersey-Long Island, NY-NJ-CT-PA
- Norfolk-Virginia Beach-Newport News, VA-NC
- Oklahoma City, OK
- Omaha, NE-IA
- Orlando, FL
- Pensacola, FL
- Peoria-Pekin, IL
- Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD
- Phoenix, AZ
- Pittsburgh, PA
- Portland-Salem, OR-WA
- Raleigh-Durham, NC
- Reading, PA
- Richmond-Petersburg, VA
- Rochester, NY
- Rockford, IL
- Sacramento-Yolo, CA
- Saginaw-Bay City-Midland, MI
- Salinas, CA
- Salt Lake City-Ogden, UT
- San Antonio, TX
- San Diego, CA
- San Francisco-Oakland-San Jose, CA
- San Joaquin, CA
- San Juan, PR
- Santa Barbara-Santa Maria-Lompoc, CA
- Scranton-Wilkes Barre, PA
- Seattle-Tacoma-Bremerton, WA
- Shreveport-Bossier City, LA
- Southeast Desert (modified), CA
- Spokane, WA
- Springfield, MA
- St. Louis, MO-IL
- Syracuse, NY
- Tampa-St. Petersburg-Clearwater, FL
- Toledo, OH
- Tucson, AZ
- Tulsa, OK
- Utica-Rome, NY
- Ventura, CA
- Washington, DC
- Washington-Baltimore, DC-MD-VA-WV
- West Palm Beach-Boca Raton-Delray Beach, FL
- Wichita, KS
- York, PA
- Youngstown-Warren, OH

# ATTACHMENT C

## A Comparison of New CFV/AFV Purchase Requirements for Affected Fleets

	CAA		EPACT			
Year	GVWR less than 8,500 lb (% of CFVs)	GVWR less than 26,000 lb (% of CFVs)	Federal <sup>a</sup> (% or # of AFVs)	State <sup>b</sup> (% of AFVs)	Alternative-Fuel Provide <sup>b</sup> (% of AFVs)	Municipal/Private <sup>c</sup> (% of AFVs)
1993			5,000			
1994			7,500			
1995			10,000			
1996			25%			
1997			33%	10%	30%	
1998			50%	15%	50%	
1999	30%	50%	75%	25%	70%	
2000	50%	50%	75%	50%	90%	
2001	70%	50%	75%	75%	90%	
2002	70%	50%	75%	75%	90%	20%
2003	70%	50%	75%	75%	90%	40%
2004	70%	50%	75%	75%	90%	60%
2005	70%	50%	75%	75%	90%	70%
2006	70%	50%	75%	75%	90%	70%

<sup>a</sup>Fiscal year for federal fleet acquisition requirements; model year for all others.

<sup>b</sup>As required by 10CFR Part 490.

<sup>c</sup>May be required by regulations if DOE finds these acquisitions are necessary.

## NOTES

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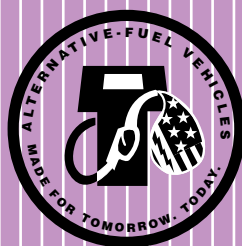
## NOTES

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